ActiveScale™ X100 System

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ActiveScale
X100 System

Highlights

▶ **Ready to Deploy** Power and network connections are all that is needed

▶ **Easy to Scale:** Increase capacity in line with data growth by scale-up or scale-out

▶ **Extreme Data Durability:** Data protection with BitDynamics, BitSpread, versioning, and advanced erasure coding

▶ **System Availability:** Geo-spread system design protects data without replication

▶ **Excellent TCO:** Low acquisition cost, power/TB, and operating costs

Applications/Environments

Cloud Service Providers
- Backup as a Service
- Storage as a Service

Media & Entertainment
- Production Media Archive
- On-premises S3 Media Target

Life Sciences and Health Care
- Genome data banks
- Medical imaging

Backup and Archive
- Tape consolidation
- Active data repository

Analytic Storage Tier
- Data lake repository

The ActiveScale™ X100 system is an integrated object storage solution that allows you to scale up from 840TB to 5.8PB (raw) and scale out to over 52PB (raw), so you can easily keep up with data growth and deliver on business objectives. For large-scale data that requires extreme data durability with easy and fast retrieval, the ActiveScale system is designed to facilitate "Data Forever" architecture for investment protection and ease of operation.

Simple to Install and Use

The ActiveScale X100 system addresses the challenges of a DIY approach by delivering an integrated system that can be up and running quickly. Each system is vertically integrated with software, networking, and hardware. Once installed in your data center the system presents an Amazon S3™-compliant object interface. Management for large-scale storage requires real-time system tools like ActiveScale SM and a cloud-based storage analytics tool, ActiveScale CM for effective and efficient management.

Extreme Scalability

Start with the base configuration and as storage requirements grow, simply add scale up modules to increase capacity. Each rack delivers up to 6GB/sec throughput for high productivity. The ActiveScale X100 system also supports scale-out for up to nine racks delivering a raw capacity of over 52PB. Grow your system without re-balancing and avoid forklift upgrades with dynamic data placement. IT staff no longer needs to buy ahead of consumption capacity, and can better match budget and capacity needs.

Outstanding Availability and Durability

Outstanding data availability and data integrity are essential for a world-class cloud infrastructure. The ActiveScale X100 system can be configured across three locations to disperse data for extreme availability with patented **BitSpread**® technology, a rateless erasure code alternative to RAID. Even with a full data center outage, the 3-site configuration delivers continuous data availability for continuous operations. In addition, **BitDynamics™** provides high data integrity with data verification performed in the background. For protection against ransomware attacks, object versioning provides the ability to recover data before intrusion. Finally, ActiveScale system features strong consistency, in contrast with weak consistency found in many other object storage systems, you don't have to worry about stale data impacting business decisions.

Changing the economics of storage

Organizations no longer have to weigh the risks of unplanned public cloud data download expense against the cost of building an on-premises private cloud with the ActiveScale X100 system. The system's vertical integration and innovation delivers a complete solution at less than DIY cost for significant CAPEX savings. Utilizing our patented helium-filled hard drives, the ActiveScale system requires less power, significantly less cooling, providing a low OPEX. Increase the value of your data with some of the many solution partners available to ActiveScale. The outstanding economics, simplicity of use and easy growth make the ActiveScale system a wise storage investment.

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Specifications

	Base Configuration	Full Instance
Capacity[1]		
Configuration capacity (raw/usable)	840TB/ 578-638TB	5.8PB/4.0-4.4PB
1-geo configuration 9 nodes (raw/usable)	840TB/578-638TB	52.9PB/36.4-40.2PB
3-geo configuration 9 nodes (raw/usable)	2.5PB/1.3-1.6PB	17.6PB/9.3-11.2PB
Maximum number of objects	45B	
Maximum multi-part object size	50TB	
Software		
Operating system software	ActiveScale OS 5.x	
Management interfaces	Real-time System Management Console, CLI, RESTful API	
System analytics	ActiveScale CM, a cloud-based storage analytics service	
Security	Data encryption in flight SSL/TLS using AES-256, Data encryption at rest using AES-256	
Data protection	BitSpread: Advanced Rateless Erasure Coding	
SW/FW upgrades	Nondisruptive rolling upgrades	
Characteristics		
Performance	Client throughput performance up to 6GB/sec	
Data durability	Up to 17 nines (99.999999999999999%)	
Connectivity		
Protocols	RESTful S3	
Client connectivity	60Gbps/base (6x10Gb/sec)	
Physical size		
Rack dimensions (mm/in)	2060 x 600 x 1200 mm (81 x 23.6 x 52.6 in)	
Configuration weight (kg/lbs)	713 kg/1572 lbs	1010kg/2457 lbs
Power		
Power consumption – typical/max (W)	2.5/3.3KW	6.4/7.4KW
Power consumption – typical/max (KVA)	2.6/3.4KVA	6.6/7.6KVA
Power characteristics	208-240V, single-phase or three-phase with redundancy and intelligent power	
Environmental		
Cooling	Redundant high efficiency fans	
Temperature range- operating (C, F)	10°C to 35°C (50°F to 95°F) derated 1°C per 300m over 960m altitude increase	
Temperature range- non-operating	-40°C to 66°C (-40°F to 151°F) derated 1°C per 300m over 3000m altitude increase	
Humidity	8% to 90% (non-condensing)	
Compliance	FCC/IES-003, CE, VCCI, CISPR 22, CISPR 24, KN22, KN24, EN60950-1 2nd edition, UL60950-1 2nd edition	
BTUs/hr (typical/max)	8.53/11.26 K BTU/h	21.83/25.25 K BTU/h
Carbon footprint	0.001 Metric Tons	0.003 Metric Tons

[1] One MB is equal to one million bytes, one GB is equal to one billion bytes, one TB equals 1,000GB (one trillion bytes) and one PB equals 1,000TB when referring to storage capacity. Usable capacity will vary from the raw capacity due to object storage methodologies and other factors.
[2] Environmental data shown is for the full configuration only

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